

Appl. No. 09/592,695
Amendment dated December 6, 2005
Reply to Office Action of June 8, 2005

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously Presented) An isolated library of structurally-constrained cyclic peptides, each said cyclic peptide having an amino acid sequence of C1-A1-A2-(A3)_n-A4-A5-C2 (SEQ ID NO: 1), wherein

C1 and C2 are cysteines;

A1, A2, A3, A4, and A5 are naturally occurring L-amino acids;

A1 and A5 are independently amino acids W, Y, F, H, I, V, or T;

A2 is amino acid W;

A3 is any naturally occurring L-amino acid and n is an integer that is 3, 4, 5, 6, 7, 8, 9, 10, 11, or 12;

A4 is amino acids W or L; and

C1 and C2 together form a disulfide bond thereby forming a cyclic peptide; the amino terminus of C1 is optionally protected with an amino protecting group; and the carboxy terminus of C2 is optionally protected with a carboxy protecting group.

2. (original) The library of claim 1, wherein A1 or A5 is a β -branched residue having two non-hydrogen substituents on the β -carbon of the amino acid residue.

3. (original) The library of claim 1, wherein A1 or A5 is T.

4. (canceled)

5. (canceled)

6. (canceled)

7. (original) The library of claim 6, wherein A2 and A4 are W.

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8. (original) The library of claim 1, wherein n is at least 4.
9. (original) The library of claim 8, wherein n is no greater than 10.
10. (original) The library of claim 9, wherein n is 4.
11. (original) The library of claim 10, wherein (A3)₄ is EGNK, ENGK, QGSF or VWQL.
12. (original) The library of claim 11, wherein A1 is T and A5 is T.
- 13-19. (cancelled)
20. (previously presented) An isolated plurality of cyclic peptides having a reverse turn secondary structure, each cyclic peptide having an amino acid sequence of C1-A1-A2-(A3)_n-A4-A5-C2 [SEQ ID NO:1], wherein
 - C1 and C2 are cysteines;
 - (A3)_n is a library of natural or synthetic amino acids where n is 3 to 12, inclusive;
 - A1 and A5 are independently amino acids W, Y, F, H, I, V, or T;
 - A2 is amino acid W;
 - A4 is amino acid W or L; and
 - C1 and C2 together form a disulfide bond thereby forming a cyclic peptide.
21. (previously presented) The isolated plurality of cyclic peptides of claim 21, wherein the reverse turn secondary structure is a β -turn, β -hairpin, β -bulge, or γ -turn.

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22. (previously presented) The isolated library of claim 19, wherein the amino terminus of Cysteine C1 is protected with an acetate and the carboxy terminus of Cysteine C2 is protected with an amine.

23. (Currently Amended) An isolated library of structurally-constrained cyclic peptides, wherein each said cyclic peptide consists of the amino acid sequence X1-C1-A1-A2-(A3)_n-A4-A5-C2-X2, wherein

C1 and C2 are cysteines;

A1, A2, A3, A4, and A5 are naturally occurring L-amino acids;

A1 and A5 are independently amino acids W, Y, F, H, I, V, or T;

A2 and A4 are ~~independently~~ amino acid W;

A3 is any naturally occurring L-amino acid and n is an integer that is 3, 4, 5, 6, 7, 8, 9, 10, 11, or 12;

X1 and X2 each consists of any naturally occurring amino acid and each is independently a peptide of about 1 to 50 amino acids ~~n is any integer from 1 to about 50;~~ and

C1 and C2 together form a disulfide bond thereby forming a cyclic peptide; the carboxy terminus of C1 is optionally protected with a carboxy protecting group; and the amino terminus of C2 is optionally protected with an amino protecting group.